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PRELIMINARY REPORT
INDUSTRY SERIES

1987

Census of Manufactures

MC87-I-37A(P)
Issued July 1989

MOTOR VEHICLES AND EQUIPMENT

Industries 3711, 3713, 3714, 3715, and 3716

INTRODUCTION

This report presents preliminary statistics from the 1987 Census of Manufactures for those establishments classified in the industries listed above. These data will be superseded by a more comprehensive final paperbound report. The method of data collection and use of administrative data are discussed in detail in the appendix.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The definitions of these industries are the same as those used in the 1987 Standard Industrial Classification (SIC) Manual.¹

INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES

In the 1987 Census of Manufactures, Industry 3711, Motor Vehicles and Car Bodies, had employment of 284.5 thousand. The employment figure was 18 percent above the 240.1 thousand reported in 1982. Compared with 1986, employment in 1987 increased 1 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$133.3 billion. The products primary to this industry appear in table 2 and aggregated to \$130.9 billion in 1987.

¹Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

The cost of materials and services used by establishments in this industry amounted to \$97.6 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3713, TRUCK AND BUS BODIES

In the 1987 Census of Manufactures, Industry 3713, Truck and Bus Bodies, had employment of 37.7 thousand. The employment figure was 34 percent above the 28.1 thousand reported in 1982. Compared with 1986, employment in 1987 increased 14 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$4.6 billion. The products primary to this industry appear in table 2 and aggregated to \$4.5 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$2.7 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES

In the 1987 Census of Manufactures, Industry 3714, Motor Vehicle Parts and Accessories, had employment of 328.7 thousand. The employment figure was 19 percent above the 321.4 thousand reported in 1982.

The total value of shipments for establishments classified in this industry was \$60.7 billion. The products primary to this industry appear in table 2 and aggregated to \$60.0 billion in 1987.

Address inquiries to Bureau of the Census, Industry Division, Washington, DC 20233, or call Chad Nelson (301) 763-7304.



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The cost of materials and services used by establishments in this industry amounted to \$34.8 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3715, TRUCK TRAILERS

In the 1987 Census of Manufactures, Industry 3715, Truck Trailers, had employment of 27.4 thousand. The employment figure was 46 percent above the 18.8 thousand reported in 1982.

The total value of shipments for establishments classified in this industry was \$3.4 billion. The products primary to this industry appear in table 2 and aggregated to \$3.1 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$2.3 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 3716, MOTOR HOMES

In the 1987 Census of Manufactures, Industry 3716, Motor Homes, had employment of 15.1 thousand. The employment figure was 110 percent above the 7.2 thousand reported in 1982. Compared with 1986, employment in 1987 increased 26 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$2.5 billion. The products primary to this industry appear in table 2 and aggregated to \$2.4 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.8 billion in 1987. Data on specific materials consumed appear in table 3.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in the tables in this publication:

-	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
(X)	Not applicable.
(Z)	Less than half the unit shown.
do	Ditto.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and s tons, are used in the customary sense.

CONTACTS FOR DATA USERS

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Census/ASM		
Durables	Kenneth Hansen	(301) 763-7304
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Current Industrial Reports		
Durables	Malcolm Bernhardt	(301) 763-2518
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Import/Export Publications	Foreign Trade Division	(301) 763-5140
Industry Analysis and Forecasts	International Trade Administration	(202) 377-4356

Table 1. Historical Statistics for the Industry: 1987 and Earlier Years

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Year ¹	All establishments ³			All employees		Production workers			Value added by manufacture ⁴ (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories ⁵ (million dollars)	Ratios	
	Compan- ies ² (no.)	Total (no.)	With 20 employ- ees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Special- ization (per- cent)	Cover- age (per- cent)
INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES															
1987 Census	(NA)	400	173	284.5	10 374.4	235.6	472.7	8 191.2	36 062.4	97 569.2	133 339.2	4 121.2	4 620.7	(NA)	(NA)
1986 ASM	(NA)	(NA)	(NA)	280.5	10 261.7	233.8	479.5	8 257.1	31 846.0	93 965.0	125 869.6	3 912.8	4 402.8	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	295.8	10 670.3	249.7	522.4	8 724.1	28 061.1	94 220.6	122 327.4	2 904.7	4 941.8	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	296.2	10 192.2	247.6	564.4	8 159.6	27 668.1	90 435.0	118 066.0	2 420.9	5 083.7	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	260.7	8 266.6	216.5	446.2	6 583.6	22 608.0	73 818.2	95 930.8	1 106.4	4 558.7	(NA)	(NA)
1982 Census	284	355	152	240.1	6 821.9	193.5	364.2	5 261.5	15 455.8	55 520.0	70 739.7	2 368.3	3 621.2	95	99
1981 ASM	(NA)	(NA)	(NA)	271.9	7 599.8	223.4	430.8	6 007.5	15 620.6	58 326.4	74 273.1	4 697.2	3 578.5	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	274.2	6 904.0	220.6	427.4	5 399.6	13 817.4	52 297.2	66 257.4	2 290.4	4 123.1	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	348.5	8 149.5	292.0	590.9	6 496.8	20 752.7	64 226.7	85 147.4	1 905.6	4 491.8	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	359.1	7 845.7	303.5	628.4	6 358.3	20 490.6	64 614.6	84 900.9	1 876.9	4 410.4	(NA)	(NA)
1977 Census	254	322	119	343.6	7 077.6	289.9	620.4	5 724.9	18 723.7	58 131.6	76 517.8	1 706.1	4 010.8	95	99
1976 ASM	(NA)	(NA)	(NA)	324.3	5 876.5	273.8	559.8	4 731.8	15 843.7	47 190.2	62 717.4	1 046.9	3 380.0	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	282.5	4 339.9	235.1	447.0	3 404.5	10 441.0	34 795.2	45 340.2	655.7	2 639.6	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	320.2	4 600.9	262.2	514.8	3 568.1	10 849.4	33 167.2	43 868.5	1 042.9	2 898.9	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	368.8	5 146.8	309.1	657.4	4 096.6	13 668.0	36 676.8	50 227.7	805.9	2 531.8	(NA)	(NA)
1972 Census	167	231	119	339.2	4 299.5	284.0	587.9	3 405.4	11 782.5	31 169.5	42 905.6	917.2	2 183.9	96	99
INDUSTRY 3713, TRUCK AND BUS BODIES															
1987 Census	(NA)	713	327	37.7	849.8	28.9	58.1	584.7	1 961.2	2 674.7	4 584.1	87.4	743.0	(NA)	(NA)
1986 ASM	(NA)	(NA)	(NA)	33.2	709.7	24.8	50.0	485.0	1 715.0	2 031.8	3 686.3	82.3	685.2	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	31.7	642.3	24.0	46.5	444.3	1 597.4	1 904.2	3 473.2	63.3	594.0	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	32.8	624.6	25.1	49.9	441.9	1 498.5	1 807.7	3 255.7	571.1	562.7	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	26.6	490.3	20.1	39.8	345.6	1 515.7	1 327.2	2 833.6	49.8	427.5	(NA)	(NA)
1982 Census	636	680	277	28.1	497.2	21.1	40.0	344.2	1 176.9	1 304.3	2 463.6	49.2	412.1	93	94
1981 ASM	(NA)	(NA)	(NA)	29.6	487.3	22.9	43.6	343.8	1 005.5	1 313.9	2 314.9	44.1	393.2	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	33.5	491.2	26.2	49.3	344.7	963.2	1 181.4	2 123.1	33.0	408.8	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	35.5	506.2	28.4	54.9	367.7	1 104.6	1 279.9	2 355.4	48.0	400.5	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	36.4	477.8	28.8	55.3	338.1	996.1	1 283.6	2 292.5	39.3	361.2	(NA)	(NA)
1977 Census ⁶	769	820	313	34.8	428.6	27.4	53.9	307.6	946.3	1 076.2	2 003.3	44.2	352.1	94	93
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES															
1987 Census	(NA)	2 747	1 302	382.7	11 745.7	303.9	626.7	8 872.5	25 896.0	34 787.1	60 696.5	2 284.1	5 575.0	(NA)	(NA)
1986 ASM	(NA)	(NA)	(NA)	376.6	11 537.3	298.7	622.6	8 755.0	24 373.5	33 019.5	57 393.9	2 644.0	5 428.7	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	385.4	11 649.6	308.7	645.2	8 935.4	26 093.7	31 551.5	57 931.0	2 962.0	5 443.1	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	381.6	10 649.9	306.3	645.2	8 185.5	23 887.7	28 986.1	52 583.1	1 725.0	5 272.9	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	338.0	8 876.2	267.3	549.0	6 728.4	21 592.6	23 092.6	44 415.4	1 056.2	4 424.0	(NA)	(NA)
1982 Census	2 000	2 420	1 111	321.4	7 614.0	251.1	481.8	5 614.2	16 764.6	19 007.0	36 293.1	1 791.7	3 945.2	93	86
1981 ASM	(NA)	(NA)	(NA)	359.4	8 412.6	285.2	548.5	6 332.6	17 253.6	19 847.1	37 080.9	3 309.4	4 450.6	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	369.1	7 886.4	287.2	549.3	5 869.0	14 719.3	17 974.3	32 881.2	3 060.1	4 565.3	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	459.1	9 087.0	372.9	745.7	7 008.8	18 033.5	22 062.3	39 807.2	2 750.7	5 091.3	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	475.8	9 099.3	391.1	811.3	7 145.4	18 377.0	22 193.2	40 283.3	2 457.8	4 537.3	(NA)	(NA)
1977 Census	2 194	2 623	997	450.7	8 004.0	372.5	777.2	6 284.9	16 263.8	19 749.7	35 750.8	1 833.2	4 124.1	94	87
1976 ASM	(NA)	(NA)	(NA)	410.0	6 453.6	339.9	698.8	5 074.0	13 709.4	15 858.7	29 024.4	962.1	3 667.8	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	362.0	4 962.5	294.4	577.0	3 799.1	9 986.3	11 960.8	22 030.1	1 114.4	2 885.1	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	410.1	5 247.7	337.1	675.9	4 069.9	10 250.0	11 686.4	21 656.0	1 290.1	3 139.8	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	444.1	5 491.4	371.1	782.4	4 356.9	10 641.3	11 273.2	21 606.5	1 033.6	2 633.3	(NA)	(NA)
1972 Census	1 746	2 119	935	400.9	4 601.5	332.3	696.0	3 620.3	9 164.7	9 330.4	18 333.5	1 113.1	2 049.6	94	86
INDUSTRY 3715, TRUCK TRAILERS															
1987 Census	(NA)	336	183	27.4	562.9	21.7	42.8	401.8	1 116.7	2 285.4	3 383.6	45.5	499.8	(NA)	(NA)
1986 ASM	(NA)	(NA)	(NA)	23.6	492.4	18.1	36.0	347.6	786.8	1 898.8	2 714.3	531.6	370.0	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	26.4	533.1	20.4	39.6	376.0	817.1	2 116.8	2 931.8	66.1	447.0	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	27.9	524.0	22.1	43.5	378.6	1 036.5	2 302.6	3 311.1	35.8	452.1	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	21.6	394.0	16.4	32.3	272.0	670.9	1 508.3	2 171.6	38.8	454.6	(NA)	(NA)
1982 Census	286	325	154	18.8	339.6	14.0	27.1	223.2	592.2	1 193.6	1 820.6	39.7	342.8	95	95
1981 ASM	(NA)	(NA)	(NA)	25.6	410.4	20.0	39.2	288.8	653.9	1 523.5	2 206.2	555.3	369.5	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	27.7	412.2	21.1	39.4	280.5	834.3	1 580.7	2 435.8	55.2	440.6	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	35.7	476.4	28.3	53.8	341.7	1 134.9	1 993.3	3 088.2	37.1	493.4	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	32.0	403.0	25.7	49.5	286.8	939.4	1 604.0	2 498.0	39.0	448.1	(NA)	(NA)
1977 Census	316	353	165	28.1	322.0	22.5	43.1	229.9	645.9	1 285.3	1 910.1	36.2	355.0	94	96
1976 ASM	(NA)	(NA)	(NA)	21.4	234.4	16.4	31.0	158.3	487.6	816.5	1 297.3	14.5	239.0	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	18.6	187.2	13.9	25.6	120.8	356.1	536.0	921.6	32.6	234.1	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	30.4	276.0	24.2	45.1	197.5	568.5	1 087.3	1 636.9	29.7	308.6	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	29.9	249.7	23.9	46.0	182.7	506.1	865.2	1 369.5	28.0	260.2	(NA)	(NA)
1972 Census	215	255	139	24.7	205.6	19.7	37.8	149.1	449.3	684.8	1 117.9	14.6	190.9	96	94
INDUSTRY 3716, MOTOR HOMES															
1987 Census	(NA)	162	80	15.1	314.5	11.8	23.4	210.2	668.1	1 817.8	2 475.9	18.9	314.7	(NA)	(NA)
1986 ASM	(NA)	(NA)	(NA)	12.0	232.4	9.5	18.2	154.0	492.0	1 382.3	1 887.2	22.3	212.9	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	12.2	223.2	9.7	18.9	149.8	558.1	1 337.1	1 872.2	41.8	236.3	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	14.2	244.4	11.7	22.4	162.4	613.9	1 446.7	2 080.1	28.3	192.2	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	11.7	246.8	9.2	19.1	139.9	582.2	1 388.4	1 934.3	13.9	191.2	(NA)	(NA)
1982 Census	79	87	55	7.2	120.6	5.7	10.2	79.3	304.0	653.1	952.7	15.5	131.9	97	88
1981 ASM	(NA)	(NA)	(NA)	9.1	117.6	6.0	10.2	74.2	299.8	815.7	1 105.7	8.7	102.5	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)</												

Table 1. **Historical Statistics for the Industry: 1987 and Earlier Years—Con.**²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.³Includes establishments with payroll at any time during year.⁴Beginning with the 1982 Census of Manufactures, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior Censuses and annual surveys of manufactures in which respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, inventories and value added by manufacture are not comparable to prior-year data.⁵Estimates for new capital expenditures have associated standard error of 15 percent or more and may be of limited reliability. Estimates for other data items are of acceptable reliability.⁶Industry was defined or redefined for 1977 Census of Manufactures; data are available only for years shown.Table 2. **Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987			1982		
		Number of companies with shipments of \$100,000 or more	Product shipments ¹		Number of companies with shipments of \$100,000 or more	Product shipments ¹	
			Quantity ²	Value (million dollars)		Quantity ²	Value (million dollars)
3711- --	MOTOR VEHICLES AND CAR BODIES						
	Total	(NA)	(X)	130 850.6	(NA)	(X)	66 705.6
37111 --	Passenger cars, knockdown or assembled, and chassis for sale separately	(NA)	(X)	79 853.3	(NA)	(X)	42 902.3
37111 11	Complete vehicles, knockdown or assembled, including station wagons, ambulances, hearses, and taxicabs if produced on passenger car chassis. For vehicles to be assembled abroad, value reportable on same basis as for domestic interplant shipments of knockdown vehicles (value includes extra equipment billed with vehicles)	(NA)	7 258.3	79 835.3	(NA)	5 234.0	42 902.3
37111 51	Chassis for sale separately	(NA)					
37111 00	Passenger cars and chassis, n.s.k.	(NA)	(X)	17.9	(NA)	(X)	-
37112 --	Trucks, truck tractors, and truck and bus chassis (chassis of own manufacture)	(NA)	(X)	47 701.3	(NA)	(X)	19 295.5
37112 01	Truck, bus, and other road vehicle chassis fitted with engine, but without cab	(NA)	(D)	(D)			
37112 02	Truck tractors for semitrailers	(NA)	23.3	982.1			
	Truck and other road vehicles fitted with engine and cab, with or without body:						
	Trucks designed primarily for transporting passengers:						
	Passenger carrier, (window) vans:						
37112 03	Designed to transport less than 10 passengers	(NA)	(³)	(³)			
37112 04	Designed to transport 10 passengers or more	(NA)	(³)	(³)			
37112 05	Station wagons on truck chassis	(NA)	(³)	(³)			
37112 06	Motor homes	(NA)	(³)	(³)			
37112 07	Other (ambulance, rescue, hearse, etc.)	(NA)	³ 1 702.6	³ 19 898.7			
37112 08	Special purpose:						
37112 09	Concrete mixers	(NA)	(D)	(D)			
	Other	(NA)	(D)	(D)			
	Trucks designed primarily for the transport of goods:				(NA)	1 917.6	⁴ 19 294.4
	With compression ignition internal combustion piston engine (diesel or semidiesel):						
37112 31	Gross vehicle weight (GVW) not exceeding 5 metric tons (11,023 lb)	(NA)	(D)	(D)			
	GVW exceeding 5 metric tons, but not exceeding 20 metric tons (44,092 lb):						
37112 32	Cab chassis	(NA)	114.9	3 776.0			
37112 33	Other (complete truck)	(NA)	(D)	(D)			
37112 34	GVW exceeding 20 metric tons	(NA)	31.1	1 470.6			
	With spark ignition internal combustion piston engine (gasoline or gas):						
37112 35	GVW not exceeding 5 metric tons	(NA)	(D)	(D)			
37112 36	GVW exceeding 5 metric tons	(NA)	(D)	(D)			
37112 39	With other engines (turbine, electric, etc.)	(NA)	-	-			
37112 00	Trucks, truck tractors, and truck chassis (chassis of own manufacture), n.s.k.	(NA)	(X)	47.6	(NA)	(X)	1.1
37113 --	Buses (except trolley buses) and fire fighting vehicles (chassis of own manufacture) (see also codes 3713201 and 3713225)	(NA)	(X)	1 193.7	(NA)	(X)	893.5
37113 01	Buses, including military:						
	With compression ignition internal combustion engine (diesel or semidiesel)	(NA)	21.3	1 061.9	15	10.3	785.4
37113 02	With other engines	(NA)					
37113 03	Fire fighting vehicles	(NA)	(S)	79.2	11	5.1	106.7
37113 00	Bus and fire fighting vehicles, n.s.k.	(NA)	(X)	52.6	(NA)	(X)	1.4
37114 --	Combat vehicles, wheeled tactical vehicles or carriers, excluding tanks and self-propelled weapons:						
37114 00	Military vehicles, wheeled tactical vehicles or carriers, excluding tanks and self-propelled weapons	(NA)	(D)	(⁵)	(NA)	(D)	(⁵)
37115 --	Passenger car bodies:						
37115 00	Passenger car bodies	(NA)	(D)	(⁵)	(NA)	(D)	(⁵)
37110 --	Motor vehicles and car bodies, n.s.k.	(NA)	(X)	(NA)	(NA)	(X)	(NA)
37110 00	Motor vehicles, n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	⁵ 1 972.5	(NA)	(X)	⁵ 3 550.1
37110 02	Motor vehicles, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	129.9	(NA)	(X)	64.3

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	1987			1982		
		Number of companies with shipments of \$100,000 or more	Product shipments ¹		Number of companies with shipments of \$100,000 or more	Product shipments ¹	
			Quantity ²	Value (million dollars)		Quantity ²	Value (million dollars)
3713--	TRUCK AND BUS BODIES						
	Total	(NA)	(X)	4 455.1	(NA)	(X)	2 304.4
37131 --	Truck, bus, and other vehicle bodies (except passenger car bodies) for sale separately	(NA)	(X)	2 746.1	(NA)	(X)	1 672.6
37131 01	Bus bodies	(NA)	*29.0	316.6			
37131 02	Truck cabs	(NA)	(S)	158.9			
	Truck bodies designed primarily for transporting passengers:						
	Passenger carrier (window van) (unit body-cab):				(NA)	(⁶)	(⁶)
37131 03	Designed to transport less than 10 passengers	(NA)	(D)	(D)			
37131 04	Designed to transport 10 passengers or more	(NA)	(D)	(D)			
37131 06	Rescue, ambulance, hearse, etc.	(NA)	(S)	7.7			
37131 07	Other	(NA)	(D)	(D)			
	Truck bodies designed primarily for transporting goods:						
	Vans with unit body-cab:						
37131 11	Multistop	(NA)	(D)	(D)			
37131 13	Other, including panel	(NA)	8.6	52.6	(NA)	(S)	112.3
	Vans with separate cab:						
37131 15	Refrigerated (except food service)	(NA)	*3.9	48.0	24	*2.1	17.2
37131 16	Food service	(NA)	*4.3	39.0	14	3.7	17.8
37131 17	Other	(NA)	*22.6	108.0	34	18.9	67.9
37131 21	Tank	(NA)	(S)	90.6	20	*7.1	67.1
	Garbage and refuse (packer-types):						
37131 31	Front loading	(NA)	9	31.2	9	1.1	25.8
37131 32	Rear loading	(NA)	4.2	80.5	12	6.1	67.7
37131 35	Side loading	(NA)	(S)	20.4	8	1.7	26.8
37131 39	Other	(NA)	(S)	6.0	8	*1.0	17.4
37131 43	Beverage	(NA)	*1.8	22.9	9	*2.1	21.3
37131 49	Pickup	(NA)	(S)	6.5	(NA)	(⁶)	(⁶)
37131 53	Dump	(NA)	(S)	131.8	56	*24.1	77.7
37131 55	Stake and platform	(NA)	*28.7	45.6	40	*33.8	38.2
37131 57	Other	(NA)	(S)	34.7	38	*27.2	69.8
	Special purpose truck bodies (not designed primarily for transporting passengers or goods):						
37131 61	Utility line service	(NA)	(S)	76.5	53	*38.0	101.5
37131 62	Other mobile service types	(NA)	(S)	86.4	12	13.8	37.5
37131 63	Wrecker	(NA)	1.4	13.9	12	(S)	12.7
37131 69	Other special purpose	(NA)	(S)	82.6	(NA)	(S)	*843.6
37131 00	Truck, bus, and other vehicle bodies, n.s.k.	(NA)	(X)	133.6	(NA)	(X)	50.3
37132 --	Complete vehicles produced on purchased chassis	(NA)	(X)	1 123.5	(NA)	(X)	523.8
37132 01	Buses (see also codes 3711301 and 3711302)	(NA)	(S)	151.8	18	*24.4	160.9
	Trucks designed primarily for transporting passengers:						
37132 02	Rescue, ambulance, hearse, etc.	(NA)	*3.2	101.6	(⁷)	(⁷)	(⁷)
37132 03	Other	(NA)	(S)	7.7			
	Trucks designed primarily for transporting goods:						
	Vans with unit body-cab:						
37132 05	Multistop	(NA)	*1.3	10.8			
37132 06	Other (including panel)	(NA)	(⁹)	(⁹)			
	Vans with separate cab:						
37132 07	Refrigerated (except food service)	(NA)	(⁹)	(⁹)	(⁹)	(⁹)	(⁹)
37132 08	Food service	(NA)	(S)	(Z)			
37132 09	Other	(NA)	*1.0	9.8			
37132 15	Tank	(NA)	(S)	13.9			
37132 16	Garbage and refuse type (packer-type)	(NA)	2	5.8			
37132 17	Beverage	(NA)	(S)	35.9			
37132 18	Dump	(NA)	*1.7	20.8			
37132 19	Stake and platform	(NA)	.3	1.3			
37132 21	Other	(NA)	*9.2	*108.2			
	Special purpose vehicle (not designed primarily for transport of passengers or goods):						
37132 25	Firefighting (see also code 3711303)	(NA)	(S)	306.9	725	75.6	7207.2
37132 26	Utility line service	(NA)	*1.4	62.0			
37132 27	Other mobile service types	(NA)	(S)	73.9			
37132 28	Wrecker	(NA)	(S)	2.2	961	925.7	9152.3
37132 29	Concrete mixer	(NA)	(D)	(¹⁰)			
37132 31	Other	(NA)	(S)	*119.4			
37132 00	Complete vehicles produced on purchased chassis, n.s.k.	(NA)	(X)	91.4	(NA)	(X)	3.4
37130 --	Truck and bus bodies, n.s.k.	(NA)	(X)	585.5	(NA)	(X)	108.0
37130 00	Truck and bus bodies, n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	383.1	(NA)	(X)	68.8
37130 02	Truck and bus bodies, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	202.4	(NA)	(X)	39.2

See footnotes at end of table.

**Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers:
1987 and 1982—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	Year	Companies reporting \$100,000 or more	Product shipments ¹		Shipments for replacement including shipments to U.S. motor vehicle manufacturers for resale		Shipments to U.S. motor vehicle manufacturers or their suppliers for use in original equipment (million dollars)	Shipments for export, including transfers to other divisions for export (million dollars)
				Quantity ²	Value (million dollars)	Quantity	Value (million dollars)		
3714- --	MOTOR VEHICLE PARTS AND ACCESSORIES								
	Total	1987	(NA)	(X)	59 953.3	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	38 414.2	(X)	(X)	(X)	(X)
37142 --	Gasoline engines and gasoline engine parts for motor vehicles, new	1987	(NA)	(X)	14 461.5	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	8 274.1	(X)	(X)	(X)	(X)
37142 01	Gasoline engines, new (with or without cylinder heads, fuel pumps, water pumps, and other standard accessories) millions..	1987	(NA)	8.1	8 984.1	(S)	1 256.5	6 984.5	743.1
		1982	9	(D)	(D)	(D)	(D)	(D)	(D)
37142 06	Intake manifolds	1987	(NA)	*1.4	58.7	(D)	(D)	(D)	(D)
		1982	12	1.0	29.3	.6	15.3	10.4	3.6
37142 07	Exhaust manifolds	1987	(NA)	8.8	172.5	(D)	(D)	72.3	(D)
		1982	12	1.7	30.8	(D)	(D)	(D)	(D)
37142 08	Crankshafts, engine	1987	(NA)	(S)	61.2	(S)	6.2	41.5	13.4
		1982	11	.5	30.7	.3	1.7	(D)	(D)
37142 09	Camshafts, engine	1987	(NA)	6.1	169.7	2.4	62.6	87.8	19.3
		1982	18	5.8	81.9	3.1	40.9	34.5	6.5
37142 15	Rocker arms and parts	1987	(NA)	(X)	42.4	(X)	(S)	(S)	(S)
		1982	7	(X)	47.0	(X)	20.8	(D)	(D)
37142 16	Valve guides, seats, and tappets	1987	(NA)	(X)	164.0	(X)	(S)	(S)	(S)
		1982	11	(X)	282.5	(X)	41.3	177.2	64.0
37142 18	Fuel injection systems millions..	1987	(NA)	18.3	712.0	(D)	(D)	(D)	(D)
		1982	8	3.5	97.8	(D)	(D)	(D)	-
37142 19	Super-chargers, including turbochargers	1987	(NA)	(D)	(D)	(D)	(D)	(D)	(D)
		1982	42	(D)	(D)	(D)	(D)	(D)	(D)
37142 21	Flywheels	1987	(NA)	4.5	49.7	(D)	(D)	35.1	(D)
		1982	11	6.7	54.3	4.9	8.6	40.9	4.8
37142 23	Timing gears	1987	(NA)	(S)	33.7	(S)	25.5	6.1	2.1
		1982	6	23.3	25.8	19.2	20.6	(D)	(D)
37142 24	Main engine bearings (halves)	1987	(NA)	(D)	(D)	(D)	(D)	(D)	(D)
		1982	3	(D)	(D)	(D)	(D)	(D)	(D)
37142 25	Connecting rod bearings (halves)	1987	(NA)	(S)	67.6	(S)	10.8	39.6	17.2
		1982	6	278.5	67.3	(D)	(D)	(D)	(D)
37142 26	Other (balance shaft, camshaft, etc.) bearings (halves)	1987	(NA)	(S)	15.6	(S)	(S)	(S)	(S)
		1982	4	(D)	(D)	(D)	(D)	(D)	(D)
37142 27	Oil pumps, new, engine	1987	(NA)	**8.6	84.4	(S)	(S)	(S)	(S)
		1982	7	4.7	24.2	1.2	6.8	(D)	(D)
37142 28	Oil pumps, new, for power steering	1987	(NA)	(D)	(D)	(D)	(D)	(D)	(D)
		1982	5	(D)	(D)	(D)	(D)	(D)	(D)
37142 29	Engine oil coolers	1987	(NA)	(D)	(D)	(D)	(D)	(D)	(D)
		1982	5	(S)	10.6	(Z)	3.5	(D)	(D)
37142 31	Fuel pump assemblies, excluding kits	1987	(NA)	173.3	602.2	21.8	87.3	482.6	32.3
		1982	11	41.4	179.2	17.2	72.1	(D)	(D)
37142 32	Water pump assemblies, excluding kits	1987	(NA)	(D)	(D)	(D)	(D)	(D)	(D)
		1982	13	7.3	99.9	3.1	49.5	(D)	(D)
37142 34	Engine cooling fans, including hubs and clutches	1987	(NA)	6.2	48.6	(D)	(D)	31.8	(D)
		1982	7	7.1	88.3	(D)	(D)	65.0	(D)
37142 35	Radiators, complete	1987	(NA)	**16.0	845.7	(D)	(D)	(S)	(D)
		1982	17	9.5	501.6	1.7	101.7	(D)	(D)
37142 36	Radiator shells and cores	1987	(NA)	(X)	112.8	(X)	(D)	-	(D)
		1982	16	(X)	88.8	(X)	82.5	6.1	.2
37142 38	Light duty (car and light truck) thermostats for engine cooling systems millions..	1987	(NA)	(D)	(D)	(D)	(D)	(D)	(D)
		1982	9	(11)	(11)	(D)	(D)	(11)	(D)
37142 39	Heavy duty thermostats for engine cooling systems	1987	(NA)	(D)	(D)	(D)	(D)	(D)	(D)
		1982	5	**106.5	**107.7	(D)	(D)	**177.5	(D)
37142 41	PCV (positive crankcase ventilation) valves	1987	(NA)	*41.3	21.0	(S)	8.5	11.9	.6
		1982	8	16.6	11.6	8.4	5.4	(D)	(D)
37142 48	All other parts and accessories for gasoline automotive engines	1987	(NA)	(X)	1 299.2	(X)	223.4	943.3	132.5
		1982	60	(X)	712.3	(X)	104.8	547.0	60.5
37142 00	Gasoline engines and gasoline engine parts for motor vehicles, new, n.s.k.	1987	(NA)	(X)	160.4	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	-	(X)	(X)	(X)	(X)
37144 --	Filters for internal combustion engines and motor vehicles, new	1987	(NA)	(X)	1 694.6	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	1 028.9	(X)	(X)	(X)	(X)
37144 01	Oil filters, light duty (car and light truck) millions..	1987	(NA)	**317.8	586.9	(S)	514.1	64.6	8.2
		1982	17	300.0	466.7	232.9	403.2	46.3	17.2
37144 02	Oil filters, heavy duty	1987	(NA)	**70.4	188.3	(S)	(S)	(S)	(S)
		1982	9	37.8	65.7	16.4	35.7	(D)	(D)
37144 04	Fuel filters, light duty (car and light truck)	1987	(NA)	**63.1	80.8	(S)	52.2	26.6	2.0
		1982	15	61.3	76.0	43.3	41.7	29.6	4.6
37144 05	Fuel filters, heavy duty	1987	(NA)	**67.8	74.1	(S)	(S)	(S)	(S)
		1982	9	25.7	45.5	21.0	36.2	(D)	(D)
37144 07	Air filters, light duty (car and light truck)	1987	(NA)	293.8	442.0	(D)	(D)	(D)	1.6
		1982	18	87.7	196.9	80.9	170.7	21.5	4.7
37144 08	Air filters, heavy duty	1987	(NA)	(S)	211.5	(S)	(S)	(S)	(S)
		1982	11	21.8	72.4	25.0	63.9	5.8	2.7
37144 09	Other filters, including coolant and hydraulic	1987	(NA)	(S)	51.3	(S)	(S)	(S)	(S)
		1982	8	(S)	105.7	(D)	(D)	(D)	(D)
37144 00	Filters for internal combustion engines and motor vehicles, new, n.s.k.	1987	(NA)	(X)	59.7	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	-	(X)	(X)	(X)	(X)

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	Year	Companies reporting \$100,000 or more	Product shipments ¹		Shipments for replacement including shipments to U.S. motor vehicle manufacturers for resale		Shipments to U.S. motor vehicle manufacturers or their suppliers for use in original equipment (million dollars)	Shipments for export, including transfers to other divisions for export (million dollars)
				Quantity ²	Value (million dollars)	Quantity	Value (million dollars)		
3714--	MOTOR VEHICLE PARTS AND ACCESSORIES— Con.								
37145 --	Exhaust system parts, new -----	1987	(NA)	(X)	2 593.9	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	1 672.2	(X)	(X)	(X)	(X)
37145 01	Mufflers, including standard, sports or glass pack, and resonators ----- millions--	1987	(NA)	(S)	660.4	(S)	357.9	289.5	13.0
		1982	22	*34.2	412.3	23.4	265.9	(D)	(D)
37145 02	Pipes, including exhaust, intermediate, connecting, crossover, tail, and side pipes -----	1987	(NA)	(X)	497.4	(X)	303.4	(D)	(D)
		1982	31	(X)	346.8	(X)	229.5	109.2	8.1
37145 03	Catalytic converters ----- millions--	1987	(NA)	97.6	1 384.5	4.5	69.3	1 233.6	81.6
		1982	10	70.6	913.1	(D)	(D)	724.2	(D)
37145 00	Exhaust system parts, new, n.s.k.-----	1987	(NA)	(X)	51.7	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	-	(X)	(X)	(X)	(X)
37146 --	Drive train components, new, except wheels and brakes -----	1987	(NA)	(X)	15 227.0	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	9 798.9	(X)	(X)	(X)	(X)
	Transmissions, except auxiliary, and parts: Car and light truck type:								
37146 03	Manual ----- millions--	1987	(NA)	(S)	350.0	(D)	(D)	332.1	(D)
		1982	4	(D)	(D)	-	-	(D)	(D)
37146 05	Automatic ----- do--	1987	(NA)	(D)	(D)	(D)	(D)	(D)	(D)
		1982	7	(D)	(D)	(D)	(D)	(D)	(D)
	Heavy truck and bus type:								
37146 13	Manual ----- millions--	1987	(NA)	(S)	558.8	(D)	(D)	(D)	(D)
		1982	7	1.3	469.2	(D)	(D)	161.5	(D)
37146 15	Automatic ----- do--	1987	(NA)	(D)	(D)	(D)	(D)	(D)	(D)
		1982	4	(D)	(D)	(D)	(D)	(D)	(D)
37146 23	Parts for manual transmissions -----	1987	(NA)	(X)	127.4	(X)	(D)	46.5	(D)
		1982	16	(X)	192.8	(X)	90.0	83.2	19.6
37146 25	Parts for automatic transmissions -----	1987	(NA)	(X)	1 490.8	(X)	(D)	(S)	(D)
		1982	30	(X)	997.6	(X)	162.1	752.4	83.1
37146 28	Transaxles ----- millions--	1987	(NA)	(D)	(D)	(D)	(D)	(D)	(D)
		1982	5	(D)	(D)	(D)	(D)	(D)	(D)
37146 31	Clutch disc and facing assemblies ----- do--	1987	(NA)	(S)	176.6	(S)	75.8	86.1	14.7
		1982	22	22.6	199.6	7.6	66.7	119.6	13.3
37146 33	Gear shifters ----- do--	1987	(NA)	(S)	21.0	(D)	(D)	10.6	(D)
		1982	10	*3.5	19.4	1.2	6.3	(D)	(D)
37146 35	Drive shafts ----- do--	1987	(NA)	(S)	423.4	(S)	87.0	294.9	41.5
		1982	9	*8.8	286.0	3.9	114.3	145.5	26.2
37146 37	Universal joints ----- do--	1987	(NA)	**98.7	389.2	(S)	129.5	236.5	23.2
		1982	8	(S)	225.8	8.9	57.3	(D)	(D)
37146 41	Axles and axle parts -----	1987	(NA)	(X)	3 909.9	(X)	165.4	3 365.4	379.1
		1982	29	(X)	3 468.3	(X)	419.3	2 648.0	401.0
37146 43	Wheel hubs, sold separately ----- millions--	1987	(NA)	(S)	117.4	(D)	(D)	(D)	(D)
		1982	12	3.5	58.2	(D)	(D)	51.6	(D)
37146 49	Other ----- do--	1987	(NA)	(S)	911.4	(S)	32.5	819.4	59.4
		1982	12	6.1	197.4	(D)	(D)	(D)	(D)
37146 00	Drive train components, new, except wheels and brakes, n.s.k.-----	1987	(NA)	(X)	92.7	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	-	(X)	(X)	(X)	(X)
37147 --	Motor vehicle wheels, new -----	1987	(NA)	(X)	1 306.1	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	815.4	(X)	(X)	(X)	(X)
	Car and light truck type:								
37147 01	Steel ----- millions--	1987	(NA)	48.7	627.4	(S)	88.2	518.0	21.2
		1982	15	31.1	447.8	11.5	162.9	258.4	26.5
37147 05	Aluminum ----- do--	1987	(NA)	*6.2	291.7	(S)	36.2	246.2	9.3
		1982	9	2.1	80.6	1.2	45.9	(D)	(D)
37147 07	Other, including combination ----- do--	1987	(NA)	(S)	84.5	(D)	(D)	75.7	(D)
		1982	7	(S)	113.1	(D)	(D)	(D)	(D)
37147 14	Heavy truck and bus type, including those for truck trailers and trailer coaches ----- do--	1987	(NA)	*21.3	288.1	(S)	66.6	217.5	4.1
		1982	8	4.8	173.9	1.6	66.6	98.6	8.7
37147 00	Motor vehicle wheels, n.s.k.-----	1987	(NA)	(X)	14.5	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	-	(X)	(X)	(X)	(X)
37148 --	Brake parts and assemblies, new -----	1987	(NA)	(X)	3 666.7	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	2 211.0	(X)	(X)	(X)	(X)
	Brake cylinders, new:								
37148 01	Wheel, sold separately ----- millions--	1987	(NA)	(S)	124.3	(S)	65.8	45.5	12.9
		1982	6	17.9	66.1	6.8	24.4	(D)	(D)
37148 02	Master, sold separately ----- do--	1987	(NA)	(S)	251.2	(S)	52.1	180.9	18.2
		1982	7	63.5	242.1	12.4	42.7	182.1	17.3
37148 03	Brake valves ----- do--	1987	(NA)	**9.9	115.9	(D)	(D)	104.4	(D)
		1982	6	(D)	(¹²)	(D)	(D)	(D)	(D)
37148 07	Brake assemblies (drum), including backing plates, shoes, linings (except asbestos), cylinders, etc., if sold together ----- do--	1987	(NA)	(S)	318.3	(S)	52.9	202.5	62.9
		1982	16	30.8	291.1	5.5	39.9	236.4	14.9
37148 09	Brake assemblies (disc/caliper), including rotors, calipers, pads (except asbestos), cylinders, etc., if sold together ----- do--	1987	(NA)	27.7	1 051.7	(S)	32.4	852.7	166.5
		1982	14	28.8	587.0	6.1	68.4	473.3	45.3
37148 11	Brake drums (with or without hub), sold separately ----- do--	1987	(NA)	20.5	337.3	(D)	(D)	264.8	(D)
		1982	11	13.5	215.1	4.3	73.3	125.1	16.7
37148 13	Brake rotors/discs (with or without hub), sold separately ----- do--	1987	(NA)	15.0	207.8	(S)	37.5	165.1	5.2
		1982	9	14.1	126.7	4.0	24.2	89.5	12.9
37148 15	Brake shoes (with or without lining), sold separately ----- do--	1987	(NA)	24.5	151.8	(S)	108.5	24.8	18.5
		1982	13	8.4	66.9	5.2	44.0	(D)	(D)
37148 17	Metallic or semimetallic brake linings, except asbestos ----- do--	1987	(NA)	(S)	61.0	(S)	(S)	(S)	(S)
		1982	5	6.4	9.0	4.8	7.6	(D)	(D)

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	Year	Companies reporting \$100,000 or more	Product shipments ¹		Shipments for replacement including shipments to U.S. motor vehicle manufacturers for resale		Shipments to U.S. motor vehicle manufacturers or their suppliers for use in original equipment (million dollars)	Shipments for export, including transfers to other divisions for export (million dollars)
				Quantity ²	Value (million dollars)	Quantity	Value (million dollars)		
3714- --	MOTOR VEHICLE PARTS AND ACCESSORIES—Con.								
37148 --	Brake parts and assemblies, new—Con.								
	Brake power actuation units:								
37148 21	Air ----- millions--	1987	(NA)	(S)	(¹³)	(D)	(D)	44.3	(D)
		1982	6	14.8	67.7	5.6	18.3	34.8	14.6
37148 23	Hydraulic----- do--	1987	(NA)	(S)	¹³ 111.0	(D)	(D)	(D)	(D)
		1982	4	.7	12.1	(D)	(D)	(D)	(D)
37148 25	Vacuum----- do--	1987	(NA)	11.3	235.5	(D)	(D)	192.4	(D)
		1982	5	(D)	(¹²)	(D)	(D)	(D)	(D)
37148 27	Other brake parts -----	1987	(NA)	(X)	588.0	(X)	(S)	(S)	(S)
		1982	27	(X)	¹² 527.1	(X)	(D)	(D)	(D)
37148 00	Brake parts and assemblies, new, n.s.k. -----	1987	(NA)	(X)	113.0	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	-	(X)	(X)	(X)	(X)
37149 --	All other motor vehicle parts and accessories, new, n.e.c. -----	1987	(NA)	(X)	16 648.7	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	12 709.5	(X)	(X)	(X)	(X)
37149 01	Bumper assemblies, bumpers, and parts -----	1987	(NA)	(X)	762.4	(X)	(S)	(S)	(S)
		1982	31	(X)	297.5	(D)	(D)	205.9	(D)
37149 02	Automotive frames ----- millions--	1987	(NA)	(D)	(¹⁴)	(D)	(D)	(D)	(D)
		1982	9	3.6	735.2	(D)	(D)	393.0	(D)
37149 03	Fuel tanks ----- do--	1987	(NA)	9.7	251.9	(S)	169.8	61.4	20.7
		1982	8	.9	105.8	(D)	(D)	(D)	(D)
37149 04	Heaters, heater cores, and other heater parts -----	1987	(NA)	(X)	602.6	(X)	(D)	(D)	(D)
		1982	16	(X)	219.5	(X)	18.7	(D)	(D)
37149 05	Shock absorbers----- millions--	1987	(NA)	(S)	614.0	(D)	(D)	(D)	8.4
		1982	6	71.1	515.5	(D)	(D)	190.8	(D)
37149 06	Tie rod ends -----	1987	(NA)	(X)	209.9	(X)	66.8	128.1	15.0
		1982	8	(X)	184.9	(X)	66.4	93.4	25.1
37149 07	Steering idler arms, drag links, and control arms -----	1987	(NA)	(X)	556.1	(X)	54.5	420.1	81.5
		1982	15	(X)	423.0	(X)	85.5	294.5	43.0
37149 08	Ball joints ----- millions--	1987	(NA)	(S)	178.5	(S)	53.1	107.1	18.2
		1982	9	32.8	161.8	7.2	55.8	(D)	(D)
37149 09	Automotive air-conditioning hose assemblies----- do--	1987	(NA)	(S)	214.1	(S)	(S)	(S)	(S)
		1982	12	18.1	142.4	(D)	(D)	(D)	-
37149 11	Automotive power steering hose assemblies ----- do--	1987	(NA)	(S)	97.0	(S)	32.6	55.4	9.2
		1982	4	58.7	45.3	(D)	(D)	(D)	(D)
37149 12	Automotive brake hose assemblies ----- do--	1987	(NA)	(S)	103.7	(S)	23.1	72.1	8.6
		1982	5	37.0	72.3	5.8	11.1	(D)	(D)
37149 13	Cruise control units ----- do--	1987	(NA)	9.1	151.6	(S)	26.0	123.4	2.2
		1982	5	10.6	111.9	(D)	(D)	(D)	(D)
37149 16	Windshield wiper blades ----- do--	1987	(NA)	60.1	113.4	(D)	(D)	(D)	(D)
		1982	5	35.1	54.6	19.0	34.9	(D)	(D)
37149 17	Windshield washer pumps ----- do--	1987	(NA)	5.9	25.3	(S)	4.9	(D)	(D)
		1982	7	5.3	23.2	1.5	6.8	(D)	(D)
37149 20	Steering wheels, columns, and gearboxes ----- do--	1987	(NA)	(S)	1 010.3	(S)	41.2	844.7	124.3
		1982	(NA)	(NA)	(¹⁵)	(NA)	(NA)	(NA)	(NA)
37149 22	Convertible tops ----- do--	1987	(NA)	.8	62.4	(S)	32.8	(D)	(D)
		1982	7	.3	29.5	.1	11.7	(D)	(D)
37149 23	Sunroofs and parts -----	1987	(NA)	(X)	38.4	(X)	(D)	(D)	(D)
		1982	8	(X)	30.7	(D)	(D)	(D)	-
37149 25	Fifth wheels ----- millions--	1987	(NA)	**130.7	73.2	(S)	47.6	23.5	2.1
		1982	3	(S)	9.2	(D)	(D)	6.2	(D)
37149 39	All other motor vehicle parts and accessories for cars, trucks, and buses, n.e.c. -----	1987	(NA)	(X)	¹⁴ 10 808.2	(X)	(S)	(S)	(S)
		1982	(NA)	(X)	¹⁵ 9 138.1	(X)	(D)	(D)	(D)
37149 00	All other motor vehicle parts and accessories for cars, trucks, and buses, n.s.k. -----	1987	(NA)	(X)	775.7	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	409.2	(X)	(X)	(X)	(X)
3714A --	Rebuilt parts for motor vehicles, excluding carburetors and engine electrical equipment -----	1987	(NA)	(X)	1 130.1	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	¹⁶ 890.4	(X)	(X)	(X)	(X)
3714A 01	Engines, gasoline ----- millions--	1987	(NA)	*.4	260.5	(X)	(X)	(X)	(X)
		1982	51	.4	221.2	(X)	(X)	(X)	(X)
3714A 02	Fuel pumps ----- do--	1987	(NA)	.7	8.6	(X)	(X)	(X)	(X)
		1982	10	.8	6.7	(X)	(X)	(X)	(X)
3714A 03	Water pumps ----- do--	1987	(NA)	6.1	95.1	(X)	(X)	(X)	(X)
		1982	39	5.4	75.3	(X)	(X)	(X)	(X)
3714A 04	Clutch discs and pressure plates ----- do--	1987	(NA)	(S)	121.3	(X)	(X)	(X)	(X)
		1982	44	6.7	97.4	(X)	(X)	(X)	(X)
3714A 05	Disc brake pads, mounted ----- do--	1987	(NA)	(D)	(¹⁷)	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	(¹⁸)	(X)	(X)	(X)	(X)
3714A 06	Power steering pumps ----- do--	1987	(NA)	(S)	23.0	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	(¹⁸)	(X)	(X)	(X)	(X)
3714A 07	Automatic transmissions ----- do--	1987	(NA)	.1	53.1	(X)	(X)	(X)	(X)
		1982	16	*.1	24.4	(X)	(X)	(X)	(X)
3714A 08	Radiator cores----- do--	1987	(NA)	(D)	(¹⁷)	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	(¹⁸)	(X)	(X)	(X)	(X)
3714A 09	Brake shoe assemblies (drum brake)----- do--	1987	(NA)	(S)	74.1	(X)	(X)	(X)	(X)
		1982	43	*20.4	70.0	(X)	(X)	(X)	(X)
3714A 10	Brake caliper assemblies (disc brake) ----- do--	1987	(NA)	1.3	15.9	(X)	(X)	(X)	(X)
		1982	23	**8.9	36.4	(X)	(X)	(X)	(X)
3714A 11	Brake master cylinders ----- do--	1987	(NA)	(S)	46.8	(X)	(X)	(X)	(X)
		1982	9	(S)	23.6	(X)	(X)	(X)	(X)
3714A 12	Brake wheel cylinders ----- do--	1987	(NA)	(D)	(¹⁷)	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	(¹⁸)	(X)	(X)	(X)	(X)
3714A 13	Manual transmissions ----- do--	1987	(NA)	4.5	2.6	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	(¹⁸)	(X)	(X)	(X)	(X)

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	Year	Companies reporting \$100,000 or more	Product shipments ¹		Shipments for replacement including shipments to U.S. motor vehicle manufacturers for resale		Shipments to U.S. motor vehicle manufacturers or their suppliers for use in original equipment (million dollars)	Shipments for export, including transfers to other divisions for export (million dollars)
				Quantity ²	Value (million dollars)	Quantity	Value (million dollars)		
3714- --	MOTOR VEHICLE PARTS AND ACCESSORIES— Con.								
3714A --	Rebuilt parts for motor vehicles, excluding carburetors and engine electrical equipment—Con.								
3714A 19	Other	1987	(NA)	(X)	17283.1	(X)	(X)	(X)	(X)
		1982	92	(X)	18302.0	(X)	(X)	(X)	(X)
3714A 00	Rebuilt parts for motor vehicles, excluding carburetors, engine electrical equipment, n.s.k.	1987	(NA)	(X)	146.0	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	33.4	(X)	(X)	(X)	(X)
37140 --	Motor vehicle parts and accessories, n.s.k.	1987	(NA)	(X)	3 224.6	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	1 013.9	(X)	(X)	(X)	(X)
37140 00	Motor vehicle parts and accessories, n.s.k., typically for establishments with 20 employees or more (see note)	1987	(NA)	(X)	2 314.3	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	587.6	(X)	(X)	(X)	(X)
37140 02	Motor vehicle parts and accessories, n.s.k., typically for establishments with less than 20 employees (see note)	1987	(NA)	(X)	910.3	(X)	(X)	(X)	(X)
		1982	(NA)	(X)	426.3	(X)	(X)	(X)	(X)
1987 product code	Product	1987				1982			
		Number of companies with shipments of \$100,000 or more	Product shipments ¹		Number of companies with shipments of \$100,000 or more	Product shipments ¹		Value (million dollars)	
			Quantity ²	Value (million dollars)		Quantity ²	Value (million dollars)		
3715- --	TRUCK TRAILERS								
	Total	(NA)	(X)	3 099.2	(NA)	(X)	1 667.5		
37151 --	Truck trailers and chassis, 10,000 lb (4.54 metric tons) maximum load rating per axle or more:								
37151 00	Truck trailers and chassis, 10,000 lb (4.54 metric tons) maximum load rating per axle or more (for additional detail, see Current Industrial Report M-37L, Truck Trailers)	(NA)	(X)	2 770.9	(NA)	(X)	1 525.5		
37152 --	Truck trailers and chassis, less than 10,000 lb (4.54 metric tons) maximum load rating per axle	(NA)	(X)	122.8	(NA)	(X)	78.3		
37152 01	Tank	(NA)	(19)	122.8	(NA)	(X)	78.3		
37152 02	Other	(NA)	19	13.0	(NA)	(X)	78.3		
37152 00	Truck trailers and chassis, less than 10,000 lb (4.54 metric tons) maximum load rating per axle, n.s.k.	(NA)	(X)	14.8	(NA)	(X)	78.3		
37150 --	Truck trailers, n.s.k.	(NA)	(X)	205.5	(NA)	(X)	63.7		
37150 00	Truck trailers, n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	128.9	(NA)	(X)	22.7		
37150 02	Truck trailers, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	76.6	(NA)	(X)	41.0		
3716- --	MOTOR HOMES PRODUCED ON PURCHASED CHASSIS								
	Total	(NA)	(X)	2 359.4	(NA)	(X)	1 035.7		
37160 --	Motor homes built on purchased chassis:								
37160 01	Conventional (Type A)	(NA)	*42.8	1 596.4	27	21.4	563.0		
37160 05	Chopped van (Type C)	(NA)	12.0	288.6	33	15.9	344.5		
37160 07	Van camper (Type B)	(NA)	*2.0	21.5	5	1.7	21.6		
37160 21	Converted vans not qualifying as van campers (Type B), motor homes (excluding custom conversions of vans to which you do not hold title)	(NA)	**12.2	107.5	21	12.2	79.6		
37160 00	Motor homes built on purchased chassis, n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	(X)	304.6	(NA)	(X)	23.6		
37160 02	Motor homes built on purchased chassis, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	(X)	40.7	(NA)	(X)	3.4		

Note: In 1987 Census of Manufactures, data for establishments of small single unit companies with up to 20 employees were estimated from administrative-record data rather than data actually collected from respondents. Employment cutoffs used for administrative records for each industry and shipments figures are included in code ending with "002". In both 1987 and 1982 Censuses of Manufactures, products not completely identified on standard forms were coded in appropriate product class (five-digit) followed by "00" or to appropriate product group code (four-digit) followed by "000".

¹Data reported by all producers, not just those with shipments of \$100,000 or more.

²For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

³For 1987, product codes 37112 03, 37112 04, 37112 05, 37112 06, and 37112 07 are combined to avoid disclosing data for individual companies.

⁴Product detail for product class 37112, Trucks, Truck Tractors, and Truck and Bus Chassis (Chassis of Own Manufacture), was totally restructured in 1987. As a result, data for product codes 37112 01 through 37112 39 are not available for 1982.

⁵For 1987 and 1982, product classes 37114, 37115, and product code 37110 00 are combined to avoid disclosing data for individual companies.

⁶For 1982, data for product codes 37131 01, 37131 02, 37131 03, 37131 04, 37131 06, 37131 07, and 37131 49 were included with product code 37131 69 to avoid disclosing data for individual companies.

⁷For 1982, data for product code 37132 02 were combined with product code 37132 25 to avoid disclosing data for individual companies.

⁸For 1987, data for product codes 37132 06 and 37132 07 are combined with product code 37132 21 to avoid disclosing data for individual companies.

⁹For 1982, data for these product were not collected separately and, therefore, are not available.

¹⁰For 1987, data for product code 37132 29 are included with product code 37132 31 to avoid disclosing data for individual companies.

¹¹For 1982, data for product code 37142 38 were combined with product code 37142 39 to avoid disclosing data for individual companies.

¹²For 1982, data for product codes 37148 03 and 37148 25 were included with product code 37148 27 to avoid disclosing data for individual companies.

¹³For 1987, data for product code 37148 21 are combined with product code 37148 23 to avoid disclosing data for individual companies.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

¹⁴For 1987, data for product code 37149 02 are included with product code 37149 39 to avoid disclosing data for individual companies.

¹⁵For 1982, data for product code 37149 20 were not collected separately but included with product code 37149 39.

¹⁶For 1982, data for product class 3714A were published as product class 37143.

¹⁷For 1987, data for product codes 3714A 05, 3714A 08, and 3714A 12 were included with product 3714A 19 to avoid disclosing data for individual companies.

¹⁸For 1982, data for product codes 3714A 05, 3714A 06, 3714A 08, 3714A 12, and 3714A 13 were not collected separately but included with product code 3714A 19.

¹⁹For 1987, data for product code 37152 01 are included with product code 37152 02 to avoid disclosing data for individual companies.

Table 3. Materials Consumed by Kind: 1987 and 1982

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text.]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES				
	Materials, parts, containers, and supplies	(X)	96 181.8	(X)	54 582.8
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes	1,000 s tons..	*18.5	11.4	39.1
331012	Sheet and strip	do..	**549.0	303.6	636.6
331013	Plates	do..	23.7	15.4	12.2
331015	Structural shapes	do..	(S)	5.8	17.8
331017	Wire and wire products	do..	(S)	16.0	*4.0
331019	All other carbon steel mill shapes and forms	do..	(S)	8.4	2.1
	Alloy steel, except stainless:				
331021	Bars and bar shapes	1,000 s tons..	(S)	2.5	41.5
331029	All other alloy mill shapes and forms	do..	(D)	(D)	1.1
331031	Stainless steel	do..	2.3	6.0	**5.9
335105	Copper and copper-base alloy	mil lb..	(D)	(D)	(D)
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil	mil lb..	*17.2	21.2	46.7
335011	Other	do..	6.3	7.2	(D)
335792	Insulated copper wire and cable, except magnet wire	do..	(D)	(D)	(D)
	Castings (rough and semifinished):				
332011	Iron (gray and malleable)	1,000 s tons..	(S)	92.3	411.3
332045	Steel	do..	(D)	(D)	(S)
336002	Nonferrous	mil lb..	(S)	.3	(D)
346200	Forgings, iron and steel	1,000 s tons..	(D)	(D)	(S)
362115	Fractional horsepower electric motors (less than 1 hp), excluding timing motors	thousands..	(D)	(D)	(D)
	Bearings, mounted and unmounted:				
356218	Ball	(X)	14.1	(X)	20.1
356201	Roller	(X)	21.8	(X)	(D)
229501	Coated, impregnated, or laminated fabrics	mil lin yd..	(D)	(D)	(D)
301101	Pneumatic and solid tires and inner tubes	mil tires..	113.6	2 470.9	37.0
305201	Rubber and plastics hose and belting	do..	(X)	248.9	(X)
306902	Fabricated rubber products, except tires, tubes, hose, belting, and gaskets	do..	(X)	131.7	(X)
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes	mil lb..	(S)	54.9	(D)
308006	Fabricated plastics products, except gaskets	(X)	525.4	(X)	225.0
285101	Paints, varnishes, lacquers, shellacs, japans, enamels, and allied products	(X)	1 028.0	(S)	441.4
345001	Bolts, nuts, screws, rivets, washers, and screw machine products	(X)	832.4	(X)	397.6
320102	Glass and glass products, including windows and mirrors	(X)	1 449.1	(X)	553.2
329221	Asbestos friction materials	(X)	(D)	(X)	(D)
227001	Carpeting	mil sq yd..	417.3	305.2	(D)
239621	Automotive trimmings, textile (panels, headliners, etc.)	(X)	(X)	815.9	(D)
239901	Seat covers, seat belts, and shoulder harnesses	(X)	(X)	735.0	(D)
253121	Seats (purchased separately) for autos, trucks, and buses	1,000 seats..	(S)	1 247.2	**876.8
289101	Glues and adhesives	mil lb..	*682.7	638.5	(D)
329302	Gaskets, packing, and sealing devices	(X)	103.9	(X)	(D)
342961	Motor vehicle metal hardware (lock units, door and window handles, hinges, license plate brackets, panel knobs, etc.)	(X)	605.5	(X)	(D)
346501	Automotive stampings (including body parts, hubcaps, fenders, etc.)	(X)	9 026.7	(X)	5 065.6
349501	Wire springs (including seat and back springs)	1,000 s tons..	(D)	(S)	113.0
349301	Steel springs, except wire (including leaf, helical, and torsion bar)	do..	(S)	506.7	(S)
358501	Refrigeration compressors, compressor units, condensing units, fin coils, and other refrigeration, air-conditioning, and heat-transfer equipment	(X)	2 354.0	(X)	(D)
359201	Pistons, piston rings, carburetors, valves, intake, and exhaust	(X)	(D)	(X)	(D)
364102	Automotive lamps (bulbs and sealed beams)	(X)	157.8	(X)	(D)
364701	Motor vehicle lighting fixtures (including headlight, taillight, and dome fixtures), except automotive lamps	(X)	401.9	(X)	(D)
365101	Automotive radios and loudspeakers	(X)	1 671.6	(X)	(D)
367412	Integrated microcircuits, including semiconductors, networks, microprocessors, and MOS memories	(X)	(D)	(X)	(*)
369104	Storage batteries, automotive	millions..	7.3	258.4	(S)
369401	Engine electrical equipment	(X)	1 267.1	(X)	(D)
351902	Diesel engines and parts specially designed for diesel engines	(X)	2 152.9	(X)	1 484.2
371401	Gasoline engines and parts specially designed for gasoline engines, not produced in same establishment	(X)	12 110.9	(X)	(D)
382441	Motor vehicle meters and gauges, except electrical (including speedometers, fuel level, oil pressure, etc., not produced in same establishment)	(X)	(D)	(X)	(D)
387311	Automotive clocks	thousands..	*866.6	11.6	*3 229.6

See footnotes at end of table.

Table 3. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3711, MOTOR VEHICLES AND CAR BODIES—Con.				
970099	All other materials and components, parts, containers, and supplies.....	(X)	48 957.7	(X)	' 30 194.3
971000	Materials, parts, containers, and supplies, n.s.k. ²	(X)	3 216.3	(X)	1 950.0
	INDUSTRY 3713, TRUCK AND BUS BODIES				
	Materials, parts, containers, and supplies	(X)	2 510.3	(X)	1 227.0
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes 1,000 s tons..	(S)	14.6	**16.5	8.9
331012	Sheet and strip do..	**266.8	166.1	**145.2	77.5
331013	Plates do..	(S)	22.1	**32.7	16.3
331015	Structural shapes do..	**32.9	18.6	(S)	9.9
331019	All other carbon steel mill shapes and forms..... do..	(S)	9.5	(S)	8.9
	Alloy steel, except stainless:				
331021	Bars and bar shapes 1,000 s tons..	(S)	2.2	(S)	.9
331029	All other alloy mill shapes and forms..... do..	*16.5	9.6	8.5	6.5
331031	Stainless steel mill shapes and forms do..	(S)	12.8	(S)	3.5
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil mil lb..	**103.2	102.5	(S)	35.9
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc..... do..	**51.9	54.3	(S)	25.1
335008	All other aluminum mill shapes and forms (wire, rolled rod, bar, powder, welded tubing, etc.) do..	(S)	1.4	(S)	.6
335792	Insulated copper wire and cable, except magnet wire do..	(S)	3.8	*1.1	1.8
	Castings (rough and semifinished):				
332001	Iron (gray and malleable) and steel 1,000 s tons..	(S)	.8	*.9	1.5
336002	Nonferrous mil lb..	(S)	4.0	1.8	1.5
301101	Pneumatic and solid tires and inner tubes mil tires..	(S)	14.0	**1	1.7
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes mil lb..	(S)	5.2	(S)	2.1
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes do..	(X)	9.6	(X)	3.6
285101	Paints, varnishes, lacquers, shellacs, japans, and enamels and allied products..... do..	(X)	57.3	(X)	17.4
346901	Metal stampings 1,000 s tons..	(S)	175.7	(S)	25.7
371000	Purchased chassis for vehicles (excluding passenger cars) thousands..	(S)	155.5	**8.9	102.1
371412	Axles, brakes, drums, rims, wheels, and other metal motor wheel parts do..	(X)	34.9	(X)	9.6
242101	Rough and dressed lumber mil bd ft..	(S)	20.0	(S)	4.1
243001	Veneer and plywood do..	(X)	9.7	(X)	5.2
342961	Motor vehicle hardware do..	(X)	87.0	(X)	17.7
349301	Steel springs do..	(X)	6.7	(X)	.6
358501	Compressors, compressor units, condensing units, fin coils, and other heat transfer equipment do..	(X)	19.0	(X)	8.7
345001	Bolts, nuts, screws, rivets, washers, and screw machine products do..	(X)	22.8	(X)	9.0
320102	Glass and glass products, including windows and mirrors do..	(X)	39.3	(X)	8.8
970099	All other materials and components, parts, containers, and supplies consumed (see note).....	(X)	938.2	(X)	' 419.8
971000	Materials, parts, containers, and supplies, n.s.k. ²	(X)	493.1	(X)	392.1
	INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES				
	Materials, parts, containers, and supplies	(X)	32 253.1	(X)	17 772.2
	Mill shapes and forms, except castings and forgings:				
	Carbon steel:				
331011	Bars and bar shapes 1,000 s tons..	*722.2	451.8	*654.0	393.0
331012	Sheet and strip do..	**3 288.5	1 659.5	*3 434.3	1 747.2
331013	Plates do..	*151.9	73.8	(S)	59.4
331015	Structural shapes do..	(S)	145.6	(S)	37.6
331017	Wire and wire products do..	(S)	89.4	**105.4	71.8
331019	All other carbon steel mill shapes and forms..... do..	*363.1	234.7	**224.5	150.1
	Alloy steel, except stainless:				
331021	Bars and bar shapes 1,000 s tons..	*478.9	255.9	*279.9	188.1
331029	All other alloy mill shapes and forms..... do..	(S)	173.3	*241.1	159.2
	Stainless steel:				
331033	Sheet and strip 1,000 s tons..	(S)	190.4	**77.9	103.9
331050	All other stainless steel mill shapes and forms do..	(S)	57.1	(S)	23.4
	Copper and copper-base alloy:				
335728	Bare wire for electrical conduction only mil lb..	(S)	11.0	1.9	3.0
335102	Rod, bar, and mechanical wire, including extruded and/or drawn shapes do..	*123.2	113.8	*89.9	72.8
335143	Plate, sheet, and strip, including military cups and discs..... do..	**106.8	124.7	*107.4	113.3
335152	Pipe and tube do..	*13.3	21.9	*7.7	10.1
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil mil lb..	**235.7	128.9	*49.0	42.1
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc..... do..	*39.0	57.6	(S)	18.9
335008	All other aluminum mill shapes and forms (wire, rolled rod, bar, powder, welded tubing, etc.) do..	(S)	16.9	38.1	27.0
335792	Insulated copper wire and cable, except magnet wire do..	(S)	4.9	20.6	39.8
339915	Metal powders do..	(S)	73.5	*202.0	76.9
	Primary metals:				
331051	Pig iron, excluding silvery iron 1,000 s tons..	(D)	(*)	*9.3	2.1
333401	Aluminum and aluminum-base alloy refinery shapes do..	(S)	115.2	*38.0	45.0
	Scrap, excluding home scrap:				
190023	Iron and steel 1,000 s tons..	151.3	14.4	339.5	23.7
190020	Aluminum and aluminum-base alloy do..	(D)	(*)	(D)	(*)

See footnotes at end of table.

Table 3. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982					
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)				
INDUSTRY 3714, MOTOR VEHICLE PARTS AND ACCESSORIES—Con.									
Castings (rough end semifinished):									
332011	Iron (gray and malleable) -----	1,000 s tons..	*3 360.2	2 946.7	5 598.5				
332045	Steel -----	do..	(S)	388.8	(S)				
336005	Aluminum and aluminum-base alloy -----	mil lb..	(S)	1 500.6	(S)				
336006	Copper and copper-base alloy -----	do..	**9.6	10.2	(S)				
336009	Zinc and zinc-base alloy -----	do..	**31.2	37.1	*16.5				
336007	Other nonferrous -----	do..	*172.2	105.0	(D)				
Forgings:									
346200	Iron and steel -----	1,000 s tons..	(S)	1 311.4	(S)				
346310	Aluminum and aluminum-base alloy -----	mil lb..	(S)	26.3	(S)				
362115	Fractional horsepower electric motors (less than 1 hp), excluding timing motors -----	thousands..	16 500.5	65.8	*4 570.5				
Bearings, including mounted and unmounted:									
356218	Bell -----		(X)	317.6	(X)				
356201	Roller -----		(X)	292.3	(X)				
229501	Coated, impregnated, or laminated fabrics -----	mil lin yd..	(S)	49.6	10.2				
305201	Rubber and plastics hose and belting -----		(X)	125.5	(X)				
306902	Fabricated rubber products, except tires, tubes, hose, belting, and gaskets -----		(X)	283.0	(X)				
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc., but excluding sheets, rods, tubes, and shapes -----	mil lb..	**376.0	340.7	259.1				
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes -----		(X)	99.5	(X)				
308006	Fabricated plastics products, except gaskets -----		(X)	415.1	(X)				
280020	Ceramic raw materials, including powders, chemicals, and fibers, excluding refractory uses -----		(X)	41.3	(X)				
320601	Ceramic and ceramic composite parts, components, and accessories -----		(X)	(*)	(X)				
285101	Paints, varnishes, lacquers, shellacs, japans, enamels, and related products -----	1,000 gal..	(S)	127.1	**9 073.4				
345001	Bolts, nuts, screws, rivets, washers, and screw machine products -----		(X)	630.4	(X)				
320102	Glass and glass products, including windows and mirrors -----		(X)	44.1	(X)				
329221	Asbestos friction materials -----		(X)	148.1	(X)				
289101	Glues and adhesives -----	mil lb..	(S)	31.7	*31.9				
329302	Gaskets, packing, and sealing devices -----		(X)	290.4	(X)				
346501	Automotive stampings (including body parts, hubcaps, fenders, etc.) -----		(X)	1 093.2	(X)				
359201	Pistons, piston rings, carburetors, and intake and exhaust valves -----		(X)	(*)	(X)				
367004	Resistors, capacitors, transformers, electron tubes, semiconductors, and other electronic-type components -----		(X)	384.2	(X)				
369401	Engine electrical equipment (spark plugs, generators, starting motors, distributors, ignition coils, ignition harness and cable sets, switches, etc.) -----		(X)	723.5	(X)				
371401	Parts specifically designed for gasoline engines, not produced in the same establishment, except parts listed elsewhere -----		(X)	367.4	(X)				
970099	All other materials and components, parts, containers, and supplies consumed (see note) -----		(X)	*12 150.9	(X)				
971000	Materials, parts, containers, and supplies, n.s.k. ² -----		(X)	3 891.3	(X)				
INDUSTRY 3715, TRUCK TRAILERS									
Materials, parts, containers, and supplies -----									
						(X)	2 151.9	(X)	1 092.0
Mill shapes and forms, except castings and forgings:									
Carbon steel:									
331011	Bars and bar shapes -----	1,000 s tons..	(S)	23.1	**33.1				
331012	Sheet and strip -----	do..	*123.3	57.4	**58.7				
331013	Plates -----	do..	*61.5	29.0	**41.8				
331015	Structural shapes -----	do..	**106.9	57.0	(S)				
331019	All other carbon steel mill shapes and forms -----	do..	(S)	33.5	(S)				
Alloy steel, except stainless:									
331021	Bars and bar shapes -----	1,000 s tons..	28.1	14.1	(S)				
331029	All other alloy mill shapes and forms -----	do..	**7.3	5.4	(S)				
331031	Stainless steel -----	do..	**11.7	28.2	*7.7				
Aluminum and aluminum-base alloy:									
335301	Sheet, plate, and foil -----	mil lb..	**157.4	163.7	**63.8				
335405	Extruded shapes, including extruded rod, bar, pipe, tube, etc. -----	do..	157.5	162.9	**64.5				
335008	All other aluminum mill shapes and forms (wire, rolled rod, bar, powder, welded tubing, etc.) -----	do..	(S)	4.6	(S)				
335792	Insulated copper wire and cable, except magnet wire -----	do..	(S)	3.7	(S)				
Castings (rough end semifinished):									
332001	Iron (gray and malleable) and steel -----	1,000 s tons..	(S)	4.2	(S)				
336002	Nonferrous -----	mil lb..	(S)	1.5	(D)				
301101	Pneumatic tires and inner tubes -----	mil tires..	**1.2	197.1	**5				
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, excluding sheets, rods, tubes, and shapes -----	mil lb..	*7.7	6.3	(S)				
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes -----		(X)	12.8	(X)				
285101	Paints, varnishes, lacquers, shellacs, japans, enamels, and related products -----		(X)	21.8	(X)				
346901	Metal stampings -----	1,000 s tons..	(D)	(*)	**1.1				
371000	Purchased chassis for vehicles (excluding passenger cars) -----	thousands..	(S)	9.5	(S)				
371412	Axles, brakes, drums, rims, wheels, and other metal motor wheel parts -----		(X)	278.7	(X)				
242101	Rough end dressed lumber -----	mil bd ft..	(S)	66.3	(S)				
243001	Veneer and plywood -----		(X)	21.8	(X)				
342961	Motor vehicle hardware -----		(X)	46.7	(X)				

See footnotes at end of table.

Table 3. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 3715, TRUCK TRAILERS—Con.				
349301	Steel springs -----	(X)	15.5	(X)	5.3
358501	Compressors, compressors units, condensing units, fin coils, and other heat transfer equipment -----	(X)	(⁴)	(X)	.2
345001	Bolts, nuts, screws, rivets, washers, and screw machine products -----	(X)	43.1	(X)	8.5
320102	Glass and glass products, including windows and mirrors -----	(X)	(Z)	(X)	.2
970099	All other materials and components, parts, containers, and supplies consumed (see note) -----	(X)	*393.3	(X)	*206.9
971000	Materials, parts, containers, and supplies, n.s.k. ² -----	(X)	450.7	(X)	339.0
	INDUSTRY 3716, MOTOR HOMES				
	Materials, parts, containers, and supplies -----	(X)	1 756.9	(X)	645.6
	Mill shapes and forms, except castings and forgings: Carbon steel:				
331011	Bars and bar shapes ----- 1,000 s tons..]	12.8	(D)	(⁵)
331012	Sheet and strip ----- do..			(S)	5.3
331015	Structural shapes ----- do..			(S)	.6
331019	All other ----- do..			(S)	.4
331020	Alloy steel, except stainless ----- do..	(D)	(D)	(S)	(Z)
331031	Stainless steel ----- do..				
335105	Copper and copper-base alloy ----- mil lb..	(D)	(D)	(D)	(⁴)
	Aluminum and aluminum-base alloy:				
335301	Sheet, plate, and foil ----- mil lb..	(D)	(D)	(S)	2.5
335011	All other ----- do..	(D)	(D)	(D)	(⁴)
335792	Insulated copper wire and cable, except magnet wire (quantity of copper content) ----- do..	(S)	18.4	(D)	(⁴)
	Castings, (rough and semifinished):				
332045	Steel ----- 1,000 s tons..	(D)	(D)	(D)	(⁴)
336005	Aluminum and aluminum-base alloy ----- mil lb..	(S)	1.8	-	
243056	Plywood -----	(X)	43.8	(X)	(³)
242103	Dressed lumber ----- mil bd ft..	(S)	23.3	(NA)	(³)
243011	Millwork (including wood doors, window sash, moldings, and cabinets) -----	(X)	32.1	(X)	(³)
344401	Fabricated sheet metal products (except stampings) -----	(X)	24.6	(X)	(³)
282104	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc. ----- mil lb..	(D)	(D)	-	-
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes -----	(X)	12.2	(X)	1.3
308006	Fabricated plastics products, except gaskets -----	(X)	24.0	(X)	5.3
320102	Glass and glass products, including windows and mirrors -----	(X)	44.2	(X)	12.0
345001	Bolts, nuts, screws, rivets, washers, and screw machine products -----	(X)	15.1	(X)	3.4
344201	Metal doors and door units, windows, and window units -----	(X)	15.0	(X)	(³)
343201	Metal plumbing fixtures, fittings, and trim (including enameled) -----	(X)	12.6	(X)	(³)
371411	Trailer axles, wheels, brakes, under carriages, and other vehicular parts -----	(X)	30.9	-	-
227001	Carpeting -----	(X)	14.0	(X)	(³)
239101	Curtains and draperies -----	(X)	16.7	(X)	(³)
285101	Paints, varnishes, lacquers, shellacs, japans, enamels, and allied products ----- 1,000 gal..	(S)	11.6	(S)	3.0
229501	Coated, impregnated, or laminated fabrics ----- mil lin yd..	(S)	9.0	**1.2	6.4
343301	Heating equipment (except electric) -----	(X)	16.4	(X)	(³)
363001	Household appliances (including refrigerators, cooking equipment, and other household appliances, except air- conditioners) -----	(X)	52.3	(X)	(³)
358503	Air-conditioning equipment -----	(X)	41.4	(X)	(³)
364300	Current-carrying wiring devices -----	(X)	51.5	(X)	(³)
371121	Purchased chassis for motor homes ----- thousands..	47.3	508.5	*18.2	156.3
301101	Pneumatic tires and inner tubes ----- millions..	(S)	8.9	*.2	2.3
970099	All other materials and components, parts, containers, and supplies consumed (see note) -----	(X)	338.7	(X)	³ *210.5
971000	Materials, parts, containers, and supplies, n.s.k. ² -----	(X)	332.5	(X)	241.3

¹For some establishments, data have been estimated from central unit values which are based on quantity-cost relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

²Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form.

³For 1982, data were not collected separately but were included with material code 970099.

⁴Data are included with material code 970099 to avoid disclosing data for individual companies.

⁵For 1982, data for material codes 331011 and 331012 have been combined to avoid disclosing data for individual companies.

APPENDIX

Scope and Coverage and Explanation of Terms

GENERAL

The 1987 Census of Manufactures is the 32nd census of manufacturing establishments conducted in the United States. For 1987, it was conducted as part of the economic censuses, which included the censuses of mineral industries, construction industries, retail and wholesale trades, service industries, selected transportation activities, and minority-owned and women-owned businesses, under authority of title 13 of the United States Code. Title 13 specifies that an economic census be conducted every 5 years to cover years ending in 2 and 7.

SCOPE AND COVERAGE

Establishment Basis of Reporting

The census of manufactures is conducted on an establishment basis. All manufacturing establishments with one paid employee or more at any time during the year are covered by the census of manufactures. Therefore, a company operating at more than one location is required to file a separate report for each location. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units which service manufacturing establishments of the same company. Where these auxiliary operations are conducted at the same location as the manufacturing operation, they are usually included in the report for the operating manufacturing establishment.

Use of Administrative Records

From a universe of approximately 350,000 manufacturing establishments in the 1987 Census of Manufactures, approximately 150,000 small single-establishment companies were excused from filing reports. Selection of the small establishment nonmail cases was done on an industry-by-industry basis. A variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. The cutoffs were selected so the administrative-record cases would account for approximately 3 percent or less of the value of shipments for the industry. These cutoffs were then adjusted so that all single-establishment companies with less than 5 employees were excluded from the mail canvass, while all establishments with more than 20 employees were included. Where establishments in the 5 to 20 employee size range were included in the mail canvass, an abbreviated census form was frequently used.

For these nonmail establishments, (and a small number of larger establishment whose reports were not received at the time the data were tabulated) data on employment, payroll, and receipts were obtained from administrative records of other government agencies rather than from census forms. The administrative-record information was then used in conjunction with industry averages to estimate the data for these establishments. The value of shipments and cost of materials were not distributed among specific products and materials but were included in the product and material "not specified by kind" (n.s.k.) categories.

EXPLANATION OF TERMS

Number of establishments and companies—A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

All employees—Includes all full-time and part-time employees on the payrolls at any time during the year. Included are all persons on paid sick leave, paid holidays, and paid vacations. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average of those for midmonth payroll periods of March, May, August, and November.

Production workers—Includes workers up through the working-supervisor level engaged in fabricating, processing, assembling, inspecting, receiving, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial, guard services, product development, auxiliary production for plant's own use (e.g., power-plant), recordkeeping, and other closely associated services. Truckdrivers delivering ready-mixed concrete are also included in production workers.

Other employees—Includes nonproduction personnel, including those engaged in the following activities: supervision above working-supervisor level, sales (including driver/salespersons), sales delivery (truckdrivers and helpers), advertising, credit collection, installation and

servicing of own product, clerical and routine office functions, executive, purchasing, finance, legal, personnel (including cafeteria, etc.), professional, and technical employees.

Payroll—Includes the gross earnings for the “employees” defined above, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees’ Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Respondents were told that in reporting they could follow the definition of payrolls used for calculating the Federal withholding tax.

Production-worker hours—Covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave when the employee was not at the plant.

Cost of materials—Refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuels consumed, regardless of whether they were purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

The important components of this cost item are (a) all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year; (b) electric energy purchased; (c) fuels consumed for heat, power, or generating electricity; (d) work done by others on materials or parts furnished by manufacturing establishments (contract work); and (e) products bought and resold in the same condition.

Specific materials consumed (table 3)—In addition to the total cost of materials which every establishment was required to report, information was also collected for most manufacturing industries on the consumption of major materials used in manufacturing. These inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers’ records. Establishments consuming less than a specified amount (usually \$10,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which administrative records were used was estimated as “not specified by kind” (n.s.k.).

Value of shipments and other receipts—Generally refers to received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all

miscellaneous receipts such as receipts for contract work performed for others, installation and repair receipts, sale of scrap, and sale of products bought and resold without further processing. Included are all items made by or for the establishment from materials owned by it whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In a few industries, the value of production or value of work completed is used instead of value of shipments. These industries are identified in the introduction and are footnoted in table 1.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, that is, including not only the direct costs of production but also a reasonable proportion of “all other costs” (including company overhead and profit).

Shipments or production of individual products (table 2)—In the 1987 census, detailed shipment information was collected for approximately 11,000 individual products. These products are identified by a seven-digit code and are grouped into approximately 1,500 classes of products, which in turn are primary to 459 four-digit industries. Data at the five-digit product-class level have been collected each year as part of the annual survey of manufactures. Information at the seven-digit level, collected for many industries in the current industrial reports program, is not included in this table.

Value added by manufacture—This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for products manufactured plus receipts for services rendered. The result of this calculation is then adjusted by the addition of value added by merchandising operations (that is, the difference between the sales value and cost of merchandise sold without further manufacturing, processing, or assembly) plus the net change in finished goods and work-in-process inventories between the beginning and end of the year.

For those industries where value of production is collected instead of value of shipments (see footnote in table 1), value added is adjusted only for the change in work-in-process inventories between the beginning and end of the year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

Value added avoids the duplication in the figure for value of shipments which results from the use of products of some establishments as materials by others. Value

added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

Expenditures for new plant and equipment—Establishments in operation and any known plants under construction were asked to report their expenditures for (a) permanent additions and major alterations to manufacturing establishments and (b) new machinery and equipment used for replacement and additions to plant capacity if they are of the type for which depreciation accounts are ordinarily maintained.

These totals exclude expenditures for used plant and equipment, expenditures for land, and cost of maintenance and repairs charged as current operating expenses. Data for used plant and equipment will be published in the final industry bulletin.

End-of-year inventories—Comprised of (a) finished products; (b) work-in-process; and (c) materials, supplies, fuels, etc. Beginning in 1982, respondents were asked to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior years in which respondents were permitted to value their inventories using any generally accepted accounting method.

Therefore, 1982 through 1987 data for inventories are not strictly comparable to prior-year data.

Specialization and coverage ratios—An establishment is classified in a particular industry if its shipments of primary products of the industry exceed in value its shipments of the products of any other single industry. An establishments' shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). The following ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in table 1 and data on product shipments shown in table 2.

Specialization ratio—Represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio—Represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments, wherever classified.

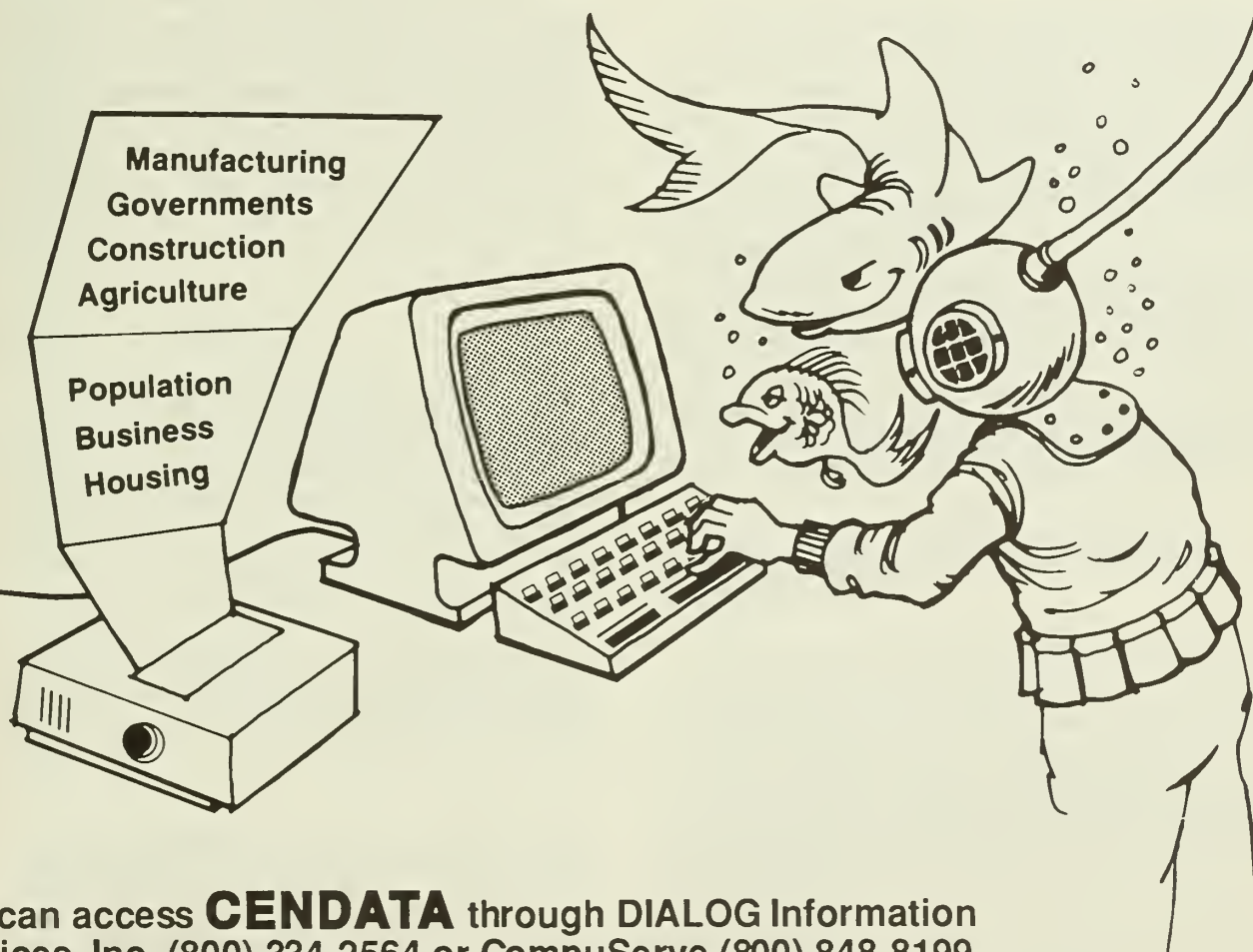


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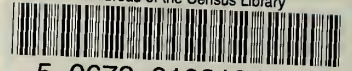
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